CENTRAL VALLEY PROJECT IMPROVEMENT ACT ACCOMPLISHMENT REPORT

FISCAL YEAR 2000

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U.S. Department of the Interior
Bureau of Reclamation
Fish and Wildlife Service

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INTRODUCTION

The Central Valley Project Improvement Act (CVPIA), signed into law in October of 1992, illuminated the importance of the Central Valley Project (CVP) in California's water resources and made significant changes in policies and administration, more so than any other legislation during the CVP's 69-year history. The CVPIA fundamentally changed authorization of the CVP by including fish and wildlife protection, restoration, and mitigation as project purposes having equal priority with irrigation and domestic water supply uses; and fish and wildlife enhancement having equal priority with power generation.

Using a broad-based ecosystem management strategy, the CVPIA provides an approach to resolve controversial issues associated with water supply reliability and ecosystem restoration in California's Central Valley. Implementation of this management strategy will be a part of the long-term environmental solution for the Central Valley, providing environmental restoration and assisting efforts to recover listed species.

The general purposes of the CVPIA, identified by Congress in Section 3402, are as follows:

(a) To protect, restore, and enhance fish, wildlife, and associated habitats in the Central Valley and Trinity River basins of California;

(b) To address impacts of the CVP on fish, wildlife, and associated habitats;

(c) To improve the operational flexibility of the CVP;

(d) To increase water-related benefits provided by the CVP to the State of California through expanded use of voluntary water transfers and improved water conservation;

(e) To contribute to the State of California's interim and long-term efforts to protect the San Francisco Bay/Sacramento-San Joaquin Delta Estuary; and

(f) To achieve a reasonable balance among competing demands for use of CVP water, including the requirements of fish and wildlife, agriculture, municipal and industrial and power contractors.

The CVPIA identified a number of specific measures to meet these new purposes and directed the Secretary of the Interior (Interior) to operate the CVP consistent with these purposes to meet Federal trust responsibilities to protect fishery resources of federally recognized Indian tribes, and to meet all requirements of Federal and California law.

To achieve cooperation with other related efforts, Interior developed extensive partnerships with local, State of California (State) and other Federal agencies, and private groups. These partnerships include participation in various programs and actions that were either formed specifically to carry out CVPIA mandates or affect its implementation in some way. Concurrent efforts affecting implementation of the CVPIA include the Coordinated Operation Agreement, the Bay-Delta Accord, and CALFED Bay-Delta Program (CALFED).

A significant factor in implementation of the CVPIA is its linkage and alignment with CALFED. CALFED's actions have the same or similar objectives and address most of the same natural resources and water management problems as actions under the CVPIA. As implementation of these programs proceed, close coordination and a focus on functional integration will be necessary to achieve common goals and avoid duplication. To ensure coordination in the prioritization of fund expenditure and implementation of CVPIA projects, Interior has worked extensively with CALFED and stakeholder groups. An example of this coordination is Interior's effort to have CALFED provide "expert level" review of proposed CVPIA programs and actions. This review is expected to help lead to a more broad-based ecosystem management strategy that more effectively addresses fish and wildlife mitigation, restoration, and enhancement.

SUMMARY

As a result of passage and implementation of the CVPIA, numerous measures have been initiated and/or completed, obligating over $466 million to date, including:

Administrative Processes

- Developing water conservation criteria for CVP contractors
- Completing the CVP Yield Increase Study
- Completing the Programmatic Environmental Impact Statement and consultation under the Endangered Species Act for implementing the CVPIA
- Completing numerous water transfers as provided for under the CVPIA
- Establishment of the CVP Restoration Fund

Environmental Restoration

- Modifying CVP operations to benefit fish and wildlife focusing on management of 800,000 acre-feet of water dedicated to the environment
- Acquiring additional water to meet fish and wildlife needs
- Acquiring, protecting, and restoring habitats adjacent to Central Valley rivers and streams
- Restoring instream habitats including placement of gravel
- Installing fish screens on water diversions
- Constructing a Temperature Control Device on Shasta Dam
- Acquiring land, under the Land Retirement Program, in areas where agricultural drainage is a problem in the San Joaquin Valley

- Increasing water deliveries to wildlife refuges and wetland areas
- Producing additional food supplies for migratory waterfowl
- Enhancing Central Valley wetlands by providing a willing participant program for the flooding of agricultural lands

During fiscal year (FY) 2000, approximately $72 million was obligated from Federal and State appropriations by the Bureau of Reclamation (Reclamation) and the Fish and Wildlife Service (Service) to implement the CVPIA. To help identify the best ways to effectively and efficiently implement provisions of the Act, Interior is working closely with other programs like CALFED, stakeholder groups, and the interested public.

FUNDING SOURCES

Restoration Fund

Section 3407 of the CVPIA establishes the "Central Valley Project Restoration Fund" (Restoration Fund) to assist the Secretary of the Interior in carrying out programs, projects, and plans, including habitat restoration, improvement, and acquisition within provisions of the CVPIA. Revenues for the Restoration Fund are derived through collections of pre-renewal charges (Section 3404 (c)(3)), tiered water rates (Section 3405 (d)), transferred water rates (Section 3405 (a)(1)(B)), Friant surcharges (subsection 3407 (d)(2)(A)), and additional mitigation and restoration payments by water and power beneficiaries (Section 3407 (c)).

In 1992 the Restoration Fund was established in the Treasury of the United States for deposit of revenues associated with contributions, payments, and charges required to be made by the CVPIA. Separate fund codes were set up to identify the different types of payments received, as well as fund codes to track expenditures for provisions under the CVPIA.

While most funding for CVPIA projects comes from Restoration Funds, a number of the projects have been co-funded or entirely funded from Reclamation's Water and Related Resources appropriation account.

In 1993, interim guidelines were developed for calculation, assessment, and collection of revenues and surcharges under Restoration Fund provisions of the CVPIA. These interim guidelines are being used in the administration and collection of these restoration funds. Presently, rules and regulations are being written on the Restoration Fund, and once finalized, will replace the guidance provided in the interim guidelines.

Cost Sharing Agreement With The State of California

Section 3406(h) of the CVPIA requires the Secretary of the Interior to enter into a binding cost-share agreement with the State for the implementation of specific restoration actions within the Act. A State-Federal master cost-share agreement for CVPIA implementation was signed by Regional Directors of Reclamation and the Service, and Directors of the California Department of Water Resources (DWR) and California Department of Fish and

Game (DFG) on June 27, 1994. The agreement included provisions on the term, scope, cost-sharing principles, task orders, budgeting/funding, and coordination of 16 restoration actions identified in the agreement as subject to cost-sharing.

The State and Interior negotiated task order agreements pursuant to the June 27,1994, Master Agreement, including:

Shasta Dam Temperature Control Device	Section 3406 (b)(6)
Red Bluff Diversion Dam	Section 3406 (b)(10)
Glenn-Colusa Irrigation District Fish Screen	Section 3406 (b)(20)
Contra Costa Canal Fish Screen	Section 3406 (b)(5)
Anadromous Fish Screening Program	Section 3406 (b)(21)
Restoration of Spawning Gravels	Section 3406 (b)(13)
Anderson-Cottonwood Irrigation District Fish Passage	Section 3406 (b)(17)
Clear Creek Restoration	Section 3406 (b)(12)
San Joaquin Basin Action Plan	Section 3406(d)(3)

A large portion of the State's cost-share funding was raised through the State bond process. In 1996 State Senator Jim Costa introduced Senate Bill 900 (SB 900), the *Water Resources and Delta Restoration Act of 1996*, as amended, which was later approved by voters providing funds for water projects, facilities, and programs in California. Included in SB 900 was a provision for $93 million to be allocated to pay the State's costs for fish and wildlife restoration measures required by the CVPIA. Of the $93 million, $60 million was raised through the State bond process. The State identified sections of CVPIA it considered to be priorities for expenditure of that $60 million and suggested the funds be incorporated into a three-to-five year budgeting process. The projects identified by the State for cost-sharing are: Shasta Dam Temperature Control Device, Red Bluff Diversion Dam, Glenn-Colusa Canal fish screen, Contra Costa Canal fish screen, the Anadromous Fish Screening Program, Vernalis Adaptive Management Plan, spawning gravel restoration, refuges, Anderson-Cottonwood Irrigation District fish passage, and Clear Creek restoration. Task orders have been written and State cost share money received on the following projects: Shasta Dam Temperature Control Device, Red Bluff Diversion Dam, Glenn-Colusa Canal Fish Screen, Anadromous Fish Screening Program, Restoration of Spawning Gravels, Anderson-Cottonwood Irrigation District Fish Passage, and Clear Creek Restoration, and Vernalis Adaptive Management Plan.

The cost-sharing agreement acknowledges a common goal of maximizing the flexibility with which restoration actions may be carried out. It was structured so that either party may fund all, none, or any percentage of a specific restoration action in any year, based on available funds. This was done so actions would not be delayed due to one party's funding constraints. The cost-sharing agreement provides that both cash and in-lieu services may be used to meet the State's obligation.

PROGRAM FOCUS

The Service and Reclamation work very closely and collaboratively in implementing the many provisions of the CVPIA. The basic procedural objectives Interior identified to guide CVPIA implementation are as follows:

- Achieve the stated goals and specific requirements of the CVPIA

- Implement the provisions of the CVPIA in a manner providing the greatest public benefit, consistent with its purposes

- Work to minimize possible adverse impacts to affected interests

- Coordinate and integrate CVPIA implementation with related or similar non-CVPIA efforts

- Develop partnerships with others in implementing actions to achieve CVPIA goals

- Fully involve public and stakeholders in the implementation process

- Use funds available in the most efficient and cost-effective manner

Priorities for actions to implement the CVPIA were set based on several factors: (1) importance of the action to program goals; (2) individual conditions, such as planning needed or readiness for implementation; (3) coordination with other ongoing programs; and (4) available funding. Additionally, provisions of the CVPIA vary in their provision of project- and program-specific guidance for implementation. While some provisions direct specific actions, studies or investigations to be completed, and some provide target dates, others focus on more administrative matters, such as authorization of funds and compliance with State and Federal laws.

Fish and Wildlife Restoration Focus

Interior is striving to implement the CVPIA in a purposeful, proactive manner, addressing first those things that are most important, that are most urgent, or that will provide the greatest biological benefit. To assist in the prioritization of actions, biological "focus areas" were developed considering three parameters: (1) the species of greatest concern, (2) the factors most influencing these fish and wildlife populations, and (3) the geographic areas or habitats critical to these populations. Interior has channeled its efforts to where these three parameters overlap to focus funds and gain the most biological benefit.

The CVPIA provided three fish and wildlife restoration goals:

- Make all reasonable efforts to at least double natural production of anadromous fish

- Provide water supplies to Central Valley refuges and other migratory waterfowl habitats

- Mitigate for other identified adverse fish and wildlife impacts of the CVP

Interior is focusing its efforts on achieving these goals as it implements the CVPIA, while providing immediate responses to the needs of the most threatened species of fish and wildlife. Because of possible far-reaching effects and public interest, Interior is taking care to involve other programs , stakeholder groups, and the general public in the development and implementation of CVPIA's mandated programs.

<u>Anadromous Fish Restoration</u>

Interior developed the following focuses for anadromous fish restoration based on the anadromous fish species and races of greatest concern, factors limiting natural production of those species, and an emphasis on those geographic areas where the greatest number of species and factors can be addressed concurrently.

The highly altered and degraded Sacramento-San Joaquin Delta is among Interior's highest priority focus areas. All species and races of anadromous fish migrate through the Delta as adults moving to upstream spawning areas and juveniles on their way to the San Francisco Bay and open ocean. Additionally, juveniles of many anadromous species rear in the Delta. Emphasis will be on offsetting the effects of the CVP and SWP export facilities (i.e., entrainment, impingement, diversion, and increased predation) and in screening other major diversion facilities. The 1994 Bay-Delta Accord provided improvement for some, but not all, species and races of anadromous fish. Steelhead, and spring-run and San Joaquin fall-run chinook salmon, in particular, remain in urgent need of additional protections.

The primary focus of Interior's efforts has been restoration actions for Sacramento River basin spring-run chinook salmon and steelhead (both listed as threatened). Emphasis has been on the acquisition of additional instream flows; riparian and shaded riverine aquatic habitat restoration, primarily on tributaries; improved access to upstream habitat; and the reduction of losses at diversions, especially on the mainstem (below Red Bluff) and tributaries of the Sacramento River and the Yuba River. Tributaries to the upper Sacramento River with the potential for sustaining natural production and promoting genetic diversity for these species include Clear, Battle, Antelope, Mill, Deer, Big Chico, and Butte creeks. In addition, the American River has been emphasized because it provides habitat for steelhead as well as several other anadromous species.

Winter-run chinook salmon, although already afforded protection under the Endangered Species Act, have not shown substantial progress towards recovery. When possible, measures will continue or increase as appropriate and will focus on providing additional flows when necessary, modification of facility operations, improvement of instream temperatures, reductions in diversion, and the replacement of spawning habitat.

Population levels of the San Joaquin River basin fall-run chinook salmon have fluctuated dramatically and have been at extremely low levels for many years. Good adult returns appear significantly correlated to high springtime flows for outmigrating juveniles down the mainstem and through the Delta 2½ years prior. In addition, restoration actions will focus on providing additional flows on tributaries to the mainstem and past the Delta pumps, restoration of river and tributary channels (including several large-scale multi-phased projects), spawning gravels, and riparian cover.

Central Valley Refuges and Other Waterfowl Habitats

Central Valley wetlands have declined approximately 95 percent from historic levels. Waterfowl and other wetland dependent species, including many listed species, have been noticeably affected, prompting inclusion of wetland restoration measures in the CVPIA to deal with the long-term problems of an insufficient habitat base and inadequate water supplies for remaining Central Valley wetlands. Additional water provided by the CVPIA will allow wetland managers to dramatically expand and enhance wetland habitat.

The focus for Central Valley refuges and other waterfowl habitats is to provide full Level 2 water supplies, two-thirds of the water supply needed for full habitat development of San Joaquin Basin Action Plan lands, and the appropriate portion of Level 4 water supplies. Necessary conveyance facilities are being provided as appropriate. Additionally, this effort provides incentives to encourage farmers to flood fields during appropriate periods for waterfowl (Section 3406(b)(22)).

Other Fish, Wildlife and Associated Habitats

The Central Valley of California contains some of the most varied natural habitats and highest biodiversity in North America. Many of these resources have been severely reduced or degraded by human settlement, population growth, and economic development. With the development of the Federal and State water projects, thousands of acres of upland, wetland, and riparian habitats were inundated by construction of major reservoirs; wetland, riparian, and aquatic habitats downstream of reservoirs were further degraded due to associated changes in timing and extent of river flows; and additional upland and seasonal wetland habitats were converted to agricultural, municipal, and industrial uses as a result of additional water made available by these projects.

Fish and wildlife species native to the Central Valley ecosystem are greatly dependent on native habitats for meeting their biological needs. As the extent of these native habitats have declined over the years, so have the extent of native fish and wildlife dependent on them. Because of this connection, native habitat trends can be used as an indicator of associated species well-being for estimating species trends. It can also be reasonably assumed that protection and restoration of these habitats will benefit dependent native species, including many listed under the Federal and State Endangered Species acts and some on the verge of extinction.

The initial focus of the (b)(1) “other” program has been based on the ranking of habitats and species of concern, the assessment of factors limiting native fish, wildlife, and associated habitats, and geographic areas where those habitats, species, and factors converge to the greatest degree. This will not be to the exclusion of other concerns or opportunities as the program proceeds. Species and habitat prioritizations will be reevaluated throughout implementation of the CVPIA.

Habitats known or believed to have experienced the greatest percentage decline in quantity and quality since construction of the CVP, and whose impacts can be attributed, at least partially, to its construction and operation, will be a focus for the (b)(1) “other” Program. These habitats include riparian, alkali desert scrub, wetlands (including vernal pools), chaparral, hardwood woodlands, grasslands, and aquatic habitats.

Populations of native species impacted by the CVP, not specifically addressed in other portions of section 3406 of the CVPIA, will be addressed in the (b)(1) “other” Program. Initial focus will be given to federally-listed, proposed or candidate species, other non-listed species of special concern including resident fish and migratory birds, and other native wildlife species associated with habitat types listed above.

PROGRESS IN ACHIEVING CVPIA GOALS/OBJECTIVES

In the years since CVPIA implementation began, the ecosystem appears to be responding very positively. The numbers of anadromous fish returning to Central Valley rivers and streams have increased and salmon have returned to spawn in areas where they have not been seen for many years. Thousands of ducks, geese, and other migrating birds have used new wetlands, and avian diseases appear to be declining. While the ecosystem is also responding to many other factors, it is reasonable to assume that some of these beneficial effects are due to CVPIA actions.

FY 2000 PROGRAM ACTIVITIES

The following provides a general overview of CVPIA activities and accomplishments in FY 2000:

Project Title: Anadromous Fish Restoration Program
CVPIA Section 3406(b)(1)
FY 2000 - $6,755,000

FY 2000 Accomplishments
Since 1995, over $30 million in Anadromous Fish Restoration Program (AFRP) funds have been invested in more than 120 restoration projects. The AFRP website (www2.delta.dfg.ca.gov/afrp/) reports on the status of these projects, including those completed in FY 2000 providing benefits from on-the-ground work, planning, research, monitoring, and support for educational outreach.

On-the-Ground Work
During FY 2000, on-the-ground activities to restore anadromous fish populations included: acquisition of a 2,724-acre site along Big Chico Creek known as the Simmon's Ranch, completion of the Sanborn Slough Bifurcation Structure on Butte Creek, restoration of riparian habitat at the Ratzlaff Reach of the Merced River, and continued stream-side habitat restoration work within the earlier acquired Grayson River Ranch property on the Tuolumne River.

As part of these on-the-ground efforts, partnerships were established with the Fisheries Foundation of California, the DFG, and a local landowner that resulted in the removal of a barrier to adult fall-run chinook salmon migration in the Cosumnes River--focusing on the construction of a box culvert through a low flow crossing area. Preliminary data indicate this action reduced the minimum passage flow requirement from 100 cubic feet per second (cfs) to 60 cfs for this reach.

In cooperation with the East Bay Municipal Utilities District and a local landowner, AFRP worked jointly to build an exclusion fence protecting 2.3 acres of riparian vegetation along the last remaining anadromous fish spawning habitat in the Mokelumne River. This project included development of an off-stream water supply for livestock, seeding the exclosure with native grasses and forbs, and the planting of approximately 2,000 native trees.

Additionally, contracts were completed and funds obligated to revegetate recently rip-rapped areas in the vicinity of Okie Dam on Butte Creek, to construct 14,500 feet of fence to protect riparian habitat on the Leininger property on Deer Creek, and to provide

preliminary engineering and environmental documents for several erosion control projects in the upper Deer Creek watershed.

Planning

Planning efforts focused on continued support of watershed management groups and teams established earlier throughout areas of the Central Valley. With the help of these groups, and the solidification of funding partnerships with other entities like CALFED, AFRP stepped up to complete evaluations and documentation essential to begin anadromous fish restoration projects. Scattered throughout the Valley, these numerous planning processes included such efforts as a feasibility study on removal of a levy at Sacramento National Wildlife Refuge, and Endangered Species Act consultation on acquisition of 40.4 acres on Mud Creek and many unscreened pumps along Butte Creek.

A significant planning effort, initiated in FY 2000, created the Adaptive Management Forum for Large-Scale Channel Restoration Projects. This effort will access and convene a wide-range of scientific expertise to review, provide input, and track some of the larger and more expensive multi-phased channel restoration projects. The intent is to assist project partners to frame projects such that the information gained on benefits and system responses will be maximized and broadly disseminated.

Research, Monitoring, and Educational Outreach

Several research and monitoring efforts were initiated or continued to help assure that Interior's implementation efforts are as effective and efficient as possible. Without these types of efforts, the appropriate adaptive management of CVPIA implementation would not be possible. Such efforts include studies to genetically identify and evaluate the extent and population size of listed anadromous fish species, placement of real-time flow monitors into rivers and streams in a effort to provide the most accurate and timely flow data to help determine our actions, and scattered environmental studies to help evaluate such things as spawning gravel availability and utility, and overall floodplain dynamics.

The identification of instream flow requirements for anadromous fish continued in many streams of the Central Valley. During FY 2000, the field work for rearing habitat availability models for fall-, late fall-, and winter-run chinook salmon between Keswick Dam and Battle Creek on the Sacramento River was completed and field work continued on the modeling of stranding locations for juvenile chinook salmon between Keswick Dam and Battle Creek. Additional data were collected for development of Habitat Suitability Criteria (HSC) for fall- and winter-run chinook salmon spawning and for juvenile chinook salmon rearing (including completion of fall-run spawning criteria). Most of the field work for spawning habitat availability models for fall-run chinook salmon between Battle Creek and Deer Creek on the Sacramento River was completed. On the lower American River, hydraulic and habitat modeling of fall-run chinook salmon and steelhead spawning habitat availability models were completed, including the evaluation of spawning, rearing, and migration. Field data collection started for development of habitat availability models for spring-run chinook salmon spawning on Butte Creek. Aerial photographs were taken on the Cosumnes River and Butte Creek for habitat mapping and to document spawning distribution and superimposition. Carcass surveys, emigration trapping, and intragravel sampling were completed on the Cosumnes River.

In an effort to provide outreach to local communities, AFRP continues to fund programs focused at stakeholder groups, school age children, and the general public. This effort,

although limited at this time, will be essential to assure the long-term survival and recovery of anadromous fish species in California's Central Valley.

Project Title: Habitat Restoration Program
CVPIA Section 3406(b)(1) "Other"
FY 2000 - $3,454,000

FY 2000 Accomplishments

Eleven conservation activities were funded in FY 2000. Seven acquisitions, totaling approximately 2,500 acres, were completed to protect native habitat from future development. These acquisitions, distributed throughout the Central Valley, will protect vernal pool, alkali sink, gabbro soil chaparral, and riparian habitats and associated fish and wildlife species, including those listed under the Federal Endangered Species Act (ESA). Funding was provided for the restoration of an additional 200 acres of riparian habitat along the Sacramento River.

Giant garter snake and yellow-billed cuckoo surveys were conducted to gather important information regarding the distribution and habitat requirements of these species. Data collected will be valuable in developing management plans for areas where the species occur. The giant garter snake survey will also provide important information regarding the species use of habitat restored in 1999 with Habitat Restoration Program funds.

The program continues to provide funding for actions necessary in the recovery of the federally listed riparian brush rabbit, including construction of facilities for a captive breeding program, and population and genetic studies.

Project Title: San Joaquin River Riparian Habitat Restoration Program
CVPIA Section 3406(b)(1) "Other"
FY 2000 - $1,412,000

FY 2000 Accomplishments

The San Joaquin River Riparian Habitat Restoration Program launched a web-site (http://www.mp.usbr.gov/cvpia/sjr/index.html) providing on-line access to program reports

and information. The program continues to support the National Park Service's Rivers, Trails and Conservation Assistance Program by funding implementation of a public outreach plan in furtherance of riparian restoration opportunities along the San Joaquin River between the City of Firebaugh and Mendota Pool.

Cooperation continues with DWR in identification of the locations, conditions, and extent of areas with native riparian plants; investigating the survivorship of recently established riparian plants; evaluating the age class distribution of the riparian forest; identifying the locations and extent of non-native, invasive plant species; and the evaluation of the potential for natural establishment and survivorship of native riparian vegetation under existing hydrological conditions.

A geographic information system (GIS) is being used to document and display areas with differing levels of restoration potential for a variety of conditions and restoration actions.

A hydraulic and sediment continuity model was developed for the San Joaquin River between Friant Dam and the Merced River. This model, once integrated with a Groundwater Model now being developed, will prove integral to successful riparian forest restoration along the San Joaquin River.

Further accomplishments include organizing, and partnering with private landowners to clean up a crossing on the San Joaquin River between the towns of Mendota and Kerman. Forty-three tons of household garbage, appliances, and over 250 tires were removed.

A grant was awarded to the San Joaquin River Parkway and Conservation Trust for restoration planning on the 300 acre Milburn/Hansen Unit adjacent to Fresno. This work will be closely coordinated with the DFG, the DWR-San Joaquin District, the Friant Water Users Authority/Natural Resource Defense Council (NRDC) Coalition, Reclamation, and the Service.

Lastly, the program funded and managed design, environmental compliance, physical and biological parameter monitoring, and permitting for the FY 2000 Pilot Project. This project provided maintenance flows (water purchased by the Friant Water Users Authority/NRDC Coalition) released from Friant Dam between July and September 2000 to maintain riparian tree seedlings planted in 1998 and 1999, and gather additional data related to surface water/groundwater interactions.

Project Title: Dedicated Project Yield
CVPIA Section 3406 (b)(2)
FY 2000 - $828,000

FY 2000 Accomplishments

Administrative tasks necessary for proper management and accounting of the water dedicated under this section began in 1994 as part of a long-term water management planning effort. Considerable debate occurred over interpretation of Section 3406 (b)(2), primarily regarding how the water may be used and how it should be accounted. Interior's *Decision on Implementation of Section 3406(b)(2) of the Central Valley Project*

Improvement Act, was released on October 5, 1999, providing Interior's understanding of the 800,000 acre-feet of dedicated water and how it is to be used and accounted.

The *Operations Criteria and Plan* for operation of the CVP and State Water Project (SWP) is being updated to reflect and include AFRP and (b)(2) implementation strategy scenarios. Consistent with the October 6, 1999 (b)(2) Decision and the associated Federal District Court order, upstream and several Delta actions were implemented for anadromous fish in FY 2000. These actions, using 800,000 acre-feet of dedicated (b)(2) water, contributed to CVPIA's goal of at least doubling the natural production of anadromous fish, while providing concurrent benefits to other fish and wildlife, including endangered species.

The effectiveness of (b)(2)-related environmental measures continue to be monitored and evaluated appropriately. To date, actions associated with implementation of Section 3406(b)(2) have included improved instream flows from increased releases and/or increased reservoir carryover, Delta export curtailments, and Delta Cross Channel gate closures. Beyond the benefits for winter-run chinook salmon and Delta smelt, these efforts

provided benefits for other anadromous fish species, including greater adult attraction flows; better instream temperatures for spawning, incubation, and juvenile rearing; and improved flows for juvenile migration, resulting in increased anadromous fish production in Central Valley streams and the Delta.

Project Title: Water Acquisition
CVPIA Section 3406(b)(3)
FY 2000 - $5,822,000

FY 2000 Accomplishments

Pursuant to implementation of the San Joaquin River Agreement, 77,700 acre-feet of water was acquired from the San Joaquin Group Authority to provide a 31-day pulse flow on the San Joaquin River during April-May 2000. Additionally, monitoring continued to evaluate the effectiveness of this pulse flow in accordance with the San Joaquin River Agreement.

Interior acquired 18,700 acre-feet of water from the Oakdale Irrigation District to improve instream flows for anadromous fish on the Stanislaus River during the summer and/or fall of 2000.

Interior acquired 11,998 acre-feet of water from the Merced Irrigation District for fall attraction flows on the Merced River between October 1 and 31, 1999. Reliance on existing Merced River monitoring efforts will result in no additional cost to the project.

Interior, the National Marine Fisheries Service (NMFS), State, and Pacific Gas and Electric (PG&E) have developed a long-term restoration plan for Battle Creek, a tributary to the Sacramento River with exceptionally high restoration potential to support winter-run, spring-run, fall-run, and late-fall run chinook salmon and steelhead. Flows in the north and south forks of Battle Creek are regulated for hydropower generation by PG&E. One of the restoration actions identified in AFRP's draft Anadromous Fish Restoration Plan (May 1997) would increase flows past PG&E's hydropower diversions on Battle Creek. The increased Battle Creek flows provide improved emigration, migration, holding, spawning, and rearing habitat for spring-run chinook salmon and steelhead.

Project Title: Tracy Pumping Plant Mitigation Program
CVPIA Section 3406(b)(4)
FY 2000 - $432,000

FY 2000 Accomplishments

Reclamation is identifying and making physical improvements and operational changes, assessing fishery conditions, and monitoring salvage operations at the existing Tracy Fish Collection Facility (TFCF). The program was expanded to include activities leading to development of a modern on-site demonstration fish screen, the Tracy Experimental Fish Facility (TEFF). This facility will be used to evaluate new technologies for replacement of the existing 40-year-old facilities.

Tracy Fish Collection Facility

Management and Operations. Activities associated with management and operation of the existing Tracy Fish Collection Facility included: installation of a newly modified traveling screen belt in August, removal and evaluation of mitten crabs from September through

November, monthly predator removal, and operation of the Tracy Aquaculture Facility to hold, care, and feed fish to be used for experimental purposes.

Research. Activities associated with research for the existing facility included: testing and modification of the Mitten Crab Traveling Screen at Reclamation's Water Resource Research Laboratory in Denver, experiments with Splittail injection into the TFCF secondary channel to determine impacts of the Mitten Crab Traveling Screen on louver efficiencies of this species, and assessment of hydraulic conditions with modern 3-vector current meters (report is 75 percent complete).

Tracy Experimental Fish Facility

Planning. Planning activities associated with the experimental fish facility at Tracy included: monthly interagency meetings of the Tracy Technical Advisory Team discussing design requirements; completion of a Project Management Plan (May 15, 2000) describing how Reclamation would study, design, construct, and evaluate the facility; completion of the Tracy Fish Test Facility (TFTF) Final Feasibility Report (August 2000); completion of a Value Engineering Study (February 10, 2000); completion of the 60 percent design review on October 12, 2000; and distribution of a Public Draft EA/IS on August 1, 2000. Reclamation is currently holding preapplication meetings with regulatory agencies to consult on TFTF permit requirements.

Research. Research activities associated with the experimental fish facility included: continued evaluation and testing of the "leaky louver" concept at the Denver Water Resources Research Laboratory; continued model studies and experimentation at Reclamation's Denver Technical Service Center in conjunction with the University of California at Davis, refining facilities design; and exploration by DFG regarding new fish distribution and stocking strategies to compliment the TFTF. The advisory team is currently developing a Tracy Facilities Research and Evaluation Document to describe experiments and evaluations to be completed once the TFTF is operational.

Public Involvement

Reclamation provided the following public involvement activities for the Tracy fish facility during FY 2000: mailed 2 fact sheets to the general public, adjacent landowners, and other interested parties; held 2 scoping meetings and 3 public workshops for the draft EA/IS, and developed and maintained a TFTF website at http://www.mp.usbr.gov/tftf/. Reclamation is currently developing a public outreach program for Hammer Island residents and others in the vicinity that may be effected by construction of the TFTF.

Project Title: Contra Costa Pumping Plant Mitigation Program
CVPIA Section 3406(b)(5)
FY 2000 - $345,000

FY 2000 Accomplishments

Most technical and policy issues have been or are being resolved by the existing Technical and Management teams. The Peer Review Team reviewed preliminary conceptual designs and offered recommendations on how the fish screen project could be improved, and a Value Engineering Team explored cost saving alternatives and made recommendations. Appropriate environmental documentation was completed and an agreement was signed providing funding participation from the State. Specifications and drawings for the fish screen project are being finalized to reflect the concerns and

recommendations of an adjacent flood control district (RD 799). The award of Phase I of a two-phase contract was completed in September of 2000. The first phase will complete activities not requiring lands outside the current right-of-way of the canal. In addition, a Western Area Power Authority (WAPA) power line is scheduled to be relocated in anticipation of initiating the second construction phase. Phase II would begin as early as July 15, 2001, and is expected to be completed by December 2003. Endangered species restrictions on when in-water work can begin and land acquisition issues, including the possible need to condemn lands necessary for the project, have delayed initiation of construction.

Other actions have included the following:

- Gaining approval for a two-phase project
- Revising land acquisition requirements to reduce impacts
- Revising appraisals and obtained right-of-entry permits as necessary
- Completing tentative permit and easement agreement with RD 799
- Reaching agreement with WAPA concerning power line relocation

Pending actions include:

- Revising the Environmental Assessment/Initial Study (EA)/IS) to update project description and add new environmental commitments
- Requesting an extension of the DFG Streambed Alteration Agreement and biological opinion
- Finalizing the agreement with RD 799
- Completing the funding agreement with WAPA for powerline relocation
- Acquiring lands (will likely require condemnations)
- Completing the funding agreement with DWR for relocation of the water quality station
- Revising the final designs for Phase II to include modifications for WAPA

Project Title: Red Bluff Diversion Dam Fish Passage Program
CVPIA Section 3406(b)(10)
FY 2000 - $1,607,000

FY 2000 Accomplishments

Fish Passage Planning Program. A Study Management Group (SMG) was formed with membership from the Interagency Fishery Team and other stakeholders to provide early

involvement, build consensus, and formulate alternatives to solve the fish passage problems at the Red Bluff Diversion Dam.

FY 2000 efforts focused on coordination. The SMG was active in providing information to and reviewing the Tehema-Colusa Canal Authority's Scoping Report of pumping alternatives as a means to securing and protecting a dependable and affordable means of delivering existing contract quantities.

Reclamation is the lead Federal agency for the Fish Passage Improvement Project and provided $300,000 in FY 2000 to fund environmental documentation for Task 4, Phase II, of the Project. Through a Cooperative Agreement, CALFED provided $90,000 in FY 2000 and will provide $1 million in FY 2001 to fund Task 1 (preliminary design), Tasks 2 & 3 (evaluate and screen the alternatives) and Task 7 (project management).

Research Pumping Plant Evaluation Program

The Service continued to conduct field work for three projects associated with the Red Bluff Research Pumping Plant (RBRPP). Spatial and temporal out-migration patterns of juvenile chinook salmon in the Sacramento River continued to be monitored through June 2000 using rotary screw traps. Seasonal and diel movement patterns and behavior of adult Sacramento pikeminnow was monitored near the pumping plant and diversion dam using radio-telemetry. Radio-telemetry was also used to track adult fall-run chinook salmon to determine their movement patterns and behavior in the vicinity of the RBRPP and the diversion dam.

Several reports were completed by Reclamation during FY 2000. An annual report entitled *Investigations of Fish Entrainment by Archimedes and Internal Helical Pumps at the Red Bluff Research Pumping Plant, Sacramento River, California*, covering the period February 1997 through June 1998, was finalized and distributed to interested parties. This is Volume 7 in the Research Pumping Plant's report series. Reclamation completed two final reports which are in the process of being printed and bound for distribution. The final report entitled *Plasma Cortisol Levels and Behavioral Stress Responses of Juvenile Chinook Salmon Passed Through Archimedes Lifts and an Internal Helical Pump at Red Bluff Research Pumping Plant, Sacramento River, California*, is Volume 8 in the Research Pumping Plant's report series. The final report entitled *Effects on Juvenile Chinook Salmon That Were Passed Through Archimedes Lifts and an Internal Helical Pump During Experiments at Red Bluff, California*, is Volume 9. A draft final report entitled *Travel Time and Condition of Juvenile Chinook Salmon Passed Through Archimedes Lifts, a Helical Pump, and Bypasses at Red Bluff Research Pumping Plant, Sacramento River, California*, has been distributed to the Interagency Fisheries Work Group for review. It is Volume 11 in the report series.

Reclamation's Research Pumping Plant Evaluation Team conducted field work in the spring of 2000 to fill in data gaps. This included conducting entrainment trials concurrently with the Service's screw trap monitoring to evaluate the proportion of riverine juvenile chinook salmon entrained into the pumping plant. Also, short duration (2-3 hours) entrainment trials were conducted to obtain a better estimate of percent mortality of wild fish entrained into the plant.

Sorting of larval fish from samples collected in 1998 and 1999 was completed. Additionally, Dr. Johnson Wang of National Environmental Services, Concord, California, completed identification of larval fish. The data was analyzed and a draft report written which is currently undergoing review by Reclamation personnel.

Hydraulic and mechanical evaluations of the pumps and facilities continue. Much of the equipment has been automated, allowing remote operation and automatic data collection. Sensors are in place allowing continuous monitoring of efficiency, bearing condition, and other operational parameters.

The annual visual mechanical inspection of the pump flights was performed on both Archimedes pumps on June 5 and 6, 2000. The inspection this year was to determine if any changes occurred in the cracks identified last year, and to weld-repair all cracks in and around the reinforcement plate and the end of the flights. As of June, 2000, Pump 1 had operated for 2,464 hours since the last inspection, accumulating approximately 12,500 hours since initial start-up in 1995. Pump 2 had operated for 2,124 hours since last inspected and has accumulated approximately 11,200 hours since initial start-up in 1995. The inspection of the two units indicated no change had occurred in any of the documented cracks from last year. All cracks that remained unrepaired from last year were weld-repaired.

The *WEMCO* Internal Helical Pump performed well during the past year. Total operation time since September 1998, when the last repairs and modifications were made to this pump, exceeded 5,000 hours.

Many parts of the original engineering evaluation plan were accomplished and up-to-date results were documented in a final report entitled; *Engineering Evaluation of the Red Bluff Research Pumping Plant on the Sacramento River in Northern California: 1995-1998*; *Report Series: Volume 6*.

Project Title: Coleman National Fish Hatchery
CVPIA Section 3406(b)(11)
FY 2000 - $1,156,000

FY 2000 Accomplishments

The objective to ozonate 30,000 gallons per minute (gpm) of water at the Coleman National Fish Hatchery was achieved in FY 2000 and demonstrated a positive effect on station operations. For the first time in Coleman's history, the juvenile brood-year of 1999 fall-run chinook salmon were released in April 2000 with no incidence of viral diseases experienced during their entire rearing cycle. Additionally, water quality resulting from operation of the sand filtration system resulted in more fish reaching the proper size at release than historically possible.

The following projects were awarded in FY 2000:

- Hatchery building seismic retrofit to meet California Zone 2 seismic requirements
- Contract providing detailed station piping and valving drawings to facilitate facility operations

- National Environmental Policy Act (NEPA) and initial and advanced design development for the water intake modification project was awarded and completed

Project Title: Clear Creek Restoration
CVPIA Section 3406(b)(12)
FY 2000 - $6,857,000

FY 2000 Accomplishments

The Clear Creek restoration program continues to aggressively implement restoration projects focusing on Saeltzer Dam fish passage, channel restoration, instream flows, spawning gravel augmentation, and monitoring.

On August 18, 2000, Interior, the Townsend Flat Water Ditch Company and DFG signed an agreement to implement the Saeltzer Dam Fish Passage and Flow Preservation Project which includes complete removal of Saeltzer Dam. Initial construction activities began in the summer of 2000 and included contractor mobilization, site preparation, and dewatering seven miles of the Townsend Flat Ditch. Demolition of the dam and headworks, and sediment removal is expected to initiate in the fall of 2000 and is scheduled for completion in January 2001 at an estimated cost of $5.5 million.

Stream channel restoration work is being conducted in four phases on a 1.8 mile reach which was heavily gravel mined, resulting in inadequate spawning gravel, numerous abandoned gravel pits, and a braided channel. These factors contribute to adult and juvenile stranding and limited spawning success. Conceptual and preliminary designs for the entire project were completed in FY 1999.

A more formal adaptive management team was formed to guide stream channel restoration projects, in recognition of: (1) uncertainties associated with the large scope of phases II through IV–the adaptive management team is considering subdividing Phase III into more manageable sub-projects; (2) the possibility of mercury contamination in mine tailings used for floodplain reconstruction; and (3) the need to improve the scope and rigor of monitoring efforts.

Phase IIA, which filled several abandoned gravel pits, was completed in May, 2000. Phase IIB draft designs were completed, and final designs and permits are being prepared with anticipated implementation in the spring and summer of 2001. Draft designs for Phases III and IV were completed and the Western Shasta Resource Conservation District submitted a CALFED proposal in May 2000 for funding to implement both phases. Final designs and permits for phases III and IV will be funded in both FY 2001 and FY 2002. Construction of Phase III is anticipated to occur in FY 2002 and FY 2003.

Monitoring in FY 2000 indicated that increased flows, achieved for the first time in the summer of 1999, provided: (1) habitat for successful spawning and production of threatened spring-run chinook salmon--resulting in the first documented case of spring-run production below Saeltzer Dam since Whiskeytown Dam was built; and (2) over-summering habitat for the first time in lower Clear Creek for threatened steelhead and late-fall chinook, which out-migrated in the fall of 1999.

Monitoring demonstrated the first successful production of fall-run chinook salmon above Saeltzer Dam in recent years. The upstream fall-run chinook salmon production may have

been due to first-time releases of 250 cfs during the adult immigration period. Minimum flows of 250 cfs were provided for the first time in September 1999 to help reduce water temperatures for spring-run chinook salmon below Saeltzer Dam. Some of the upstream chinook salmon juvenile production also successfully over-summered in the cool water above Saeltzer Dam in 2000.

In 1999, 8,003 fall-run chinook salmon were estimated to return to Clear Creek from the ocean. Since the CVPIA increased Clear Creek flows in 1995, fall-run escapement has averaged 7,210 fish, a 450 percent increase over the 1967-1991 baseline period provided in Section 3406(b)(1)of the CVPIA.

During the summer of 2000, minimum flows in Clear Creek were lower than those recommended by AFRP[1], due to constraints imposed by the Saeltzer Dam removal project. Its estimated Whiskeytown Reservoir releases will be increased to 150 cfs by October 1. With the removal of Saeltzer Dam and the ability of anadromous fish to ascend the upper reaches of the creek, summer flow needs are being reexamined.

In FY 2000, the Service initiated a two year stranding study required in the NMFS biological opinion for operation of the CVP. The study will be used to determine ramping rates for changes in Whiskeytown release. The Service is soliciting funding from CALFED for monitoring of juvenile salmonids by rotary screw trap.

Poor instream spawning habitat, resulting from gravel mining and blockage by Whiskeytown Dam, is being improved with spawning gravel introductions. Currently, gravel is being placed below Whiskeytown and Saeltzer dams every year, and we expect gravel injections to occur at these sites indefinitely. Monitoring in FY 2000 indicated that the Saeltzer Dam gravel injections have created a large spawning area with a very high density of redds. Plans are being developed to add gravel at several new locations along the creek thus increasing the total amount of gravel added to the creek from 8,000 tons to 20,000 tons in FY 2001.

Project Title: Spawning Gravel/Riparian Habitat Restoration
CVPIA Section 3406 (b)(13)
FY 2000 - $887,000

FY 2000 Accomplishments

Upper Sacramento River. Spawning gravel was added to two sites on the Sacramento River, one located below Keswick Dam (9,000 tons) and the other at Tobiasson (23,000 tons). The downstream movement of this gravel was monitored using sonic tags (pingers) imbedded in selected pieces of gravel that were mixed with gravel placed along the edge of the river to erode and eventually become salmon spawning habitat.

American River. Gravel manipulation and replacement was carried out along the American River. The work, directed by DFG, was performed at three riffle sites downstream of the Nimbus Dam, and included ripping substrates containing a clay lense and spreading

[1] AFRP recommended flows on Clear Creek are 200 cfs from October through June and 150 cfs July through September.

spawning-sized gravel by bulldozers. Monitoring demonstrated salmon spawning in the manipulated areas for the first time in several years.

Stanislaus River. On the Stanislaus River, just downstream of Goodwin Dam, gravel was added to instream areas helping to reconstruct two riffle sites. At one site, a helicopter was used to add gravel, resulting in substantial spawning by salmon shortly thereafter. At the second site, gravel was mechanically pushed into the river to supplement spawning substrate.

Project Title: Comprehensive Assessment and Monitoring Program
CVPIA Section 3406(b)(16)
FY 2000 - $869,000

FY 2000 Accomplishments

The Comprehensive Assessment and Monitoring Program (CAMP) Implementation Program continued in FY 2000, focusing on implementing the following: a data management program through the Interagency Ecological Program (IEP), a hatchery marking program, a juvenile salmon screw trapping program, a fish screen evaluation program, and an angler survey. Efforts to continue implementation of these activities were coordinated with the AFRP and CALFED.

In FY 2000, CAMP continued implementation of the data management program through the IEP, including establishment of an Internet homepage (http//www2.delta.dfg.ca.gov/camp/). The third annual CAMP report, describing 1999 data is undergoing internal review.

A long-term hatchery Constant Fractional Marking Plan proposal was completed in the summer of 2000. The total cost to implement this proposal will require cost-sharing with other funding sources.

Project Title: Hamilton City Pumping Plant Fish Facility
CVPIA Section 3406(b)(20)
FY 2000 - $2,804,000

FY 2000 Accomplishments

Construction is underway on fish screen and gradient restoration work at the Hamilton City Pumping Plant Fish Facility of Glenn-Colusa Irrigation District (GCID). Completion is expected by March 2001 which will be followed by a four-year testing and operation optimization program.

Efforts to date completed a majority of the construction on the new fish screen extension, on retrofitting the existing fish screen, on the gradient facility, and on the open bypass channel. Additionally, the design for a test fish capture structure and replacement shop and dredge dock was initiated. The mitigation planning and monitoring associated with the gradient facility was continued. The testing program and draft agreement for an audit of all cost sharing cooperating agencies was initiated.

Project Title: Anadromous Fish Screen Program
CVPIA Section 3406(b)(21)
FY 2000 - $9,242,000

FY 2000 Accomplishments

The *Anadromous Fish Screen Program-Program Description* document was completed and distributed to interested parties. This document was prepared primarily to help the public understand the program and to offer guidelines on program participation. Two additional documents were prepared to assist program participants and their consultants prepare appropriate support documents for proposed fish screen projects. One document provides guidance on the preparation of required post-construction evaluation, assessment monitoring and long term operations and maintenance (O&M) reports; the other provides guidance for environmental compliance requirements. Currently there are more projects needing/requesting funding than there are funds available to the program.

The following is a listing of on-going projects receiving a majority of Anadromous Fish Screen Program funding:

- Princeton-Codora Glenn/Provident Irrigation Districts (construction complete, fish screen criteria testing needs to be performed.)

- Reclamation District 108 (construction complete, excessive sediment requires pilot study and development of sediment removal technology prior to testing to see if criteria are met)

- Reclamation District 1004 (construction complete, testing incomplete, although existing tests indicates modification of upstream and downstream banks is needed to enable the project to meet criteria)

- Rancho Esquon (Adams Dam) Fish Screen and Ladder Project (construction complete, testing of ladders, cleaning system and bypass indicates criteria met but the fish screen needs modification to meet criteria)

- City of Sacramento Screened Diversions Project (fish screen for Sacramento River water treatment plant final design complete, 90 percent of final designs for the American River water treatment plant complete, and environmental compliance documents complete)

- Banta-Carbona Irrigation District (90 percent final design complete, environmental compliance documents submitted to regulatory agencies, monitoring approach for endangered species being developed)

- Natomas Mutual Water Company (performing a feasibility study to determine the optimal method of consolidating various diversions from the Sacramento River and Cross Canal, initiated preliminary designs and environmental reconnaissance-level study)

- Meridian Farms Water Company (performing a feasibility study to consolidate three medium sized diversions from the Sacramento River and install one fish screen)

For FY 2000, additional cost-share financial assistance agreements have been executed with the following diverters:

- Natomas Mutual Water Company - The agreement provides for work that will result in plans for consolidation and final design of its diversions, and completion of environmental documents and plans stating how it will perform post-construction testing and long-term operation and maintenance functions.

- City of Sacramento - The agreement provides for the initiation of construction on the replacement intake structure, including a fish screen meeting Delta smelt criteria at its Sacramento River water treatment plant, and to replace the (American River) Fairbairn water treatment plant's fish screens to meet current criteria.

- Pleasant Grove/Verona Mutual Water Co. - The agreement provides for the preparation of a feasibility study, including preliminary engineering designs and a preliminary EA.

- Sutter Mutual Water Company - The agreement provides for preparation of a feasibility study including preliminary engineering designs and a preliminary EA.

- Butte Sink Weir #3 - The agreement provides for the preparation of the final design, reconstruction of Weir #3, and construction of a fish ladder.

Project Title: Agricultural-Waterfowl Incentive Program
CVPIA Section 3406(b)(22)
FY 2000 - $979,000

FY 2000 Accomplishments

The major focus of this program has been on monitoring accomplishments of past years projects, and selecting and funding projects for FY 2000. Most of the program interest to date has been by Sacramento Valley rice farmers who, by participating, not only provide valuable waterfowl habitat but also gain assistance to meet their need for more appropriate rice straw decomposition. Tens of millions of bird-use days were recorded on participating properties in FY 1999 and FY 2000, with up to 40,000 birds recorded using individual fields at any one time. Waterfowl habitat created in this program is critical to the feeding and resting needs of many species of wintering waterfowl, particularly because it provides a quality habitat supplement to that existing on nearby refuges and private duck clubs.

At the end of FY 2000, incentives for flooding during winter 2000-2001 were awarded to 84 landowners who agreed to create approximately 58,000 acres of habitat on agricultural lands (an increase of 9 percent from the previous year) for the benefit of wintering waterfowl and the enhancement of CVP water supplies. The increase in enrolled acreage each year of the program is even more impressive when one considers funding levels have remained stationary during that period.

Project Title: Refuge Water Supply Program
CVPIA Section 3406(d)(1-5)
FY 2000 - $12,462,000

FY 2000 Accomplishments

The Refuge Water Supply Program implementation projects are divided into five separate geographic areas: West Sacramento Valley Study Area, East Sacramento Valley Study Area, San Joaquin Basin Action Plan Lands/Grasslands Study Area, Mendota Water Authority, and South San Joaquin Valley Study Area. The major implementation activities for each area include planning and construction activities, long-term conveyance contracts, refuge water supply contracts, and State cost-share.

West Sacramento Valley Study Area

Planning. Pursuant to requirements of NEPA and the California Environmental Quality Act (CEQA), the Final EA/Initial Study (IS) and corresponding Finding of No Significant Impact/Negative Declaration (FONSI/Neg Dec) was completed and signed for the Sacramento, Delevan, and Colusa National Wildlife Refuges (NWR) (collectively referred to as the Sacramento NWR Complex) in February of 1998. Implementation of the recommended alternative is proceeding pursuant to the September 1998 Cooperative Agreements with GCID for construction improvements and long-term conveyance, which enables water deliveries to the Sacramento NWR Complex. Execution of these agreements and allocation of corresponding funding is planned through March of 2001. Construction of the Stony Creek Siphon, a critical feature to provide the Sacramento NWR Complex water supplies using GCID facilities, was completed in March of 1999. Remaining site restoration and mitigation efforts are scheduled for completion by December of 2001. The environmental commitments made in the EA/IS, ESA biological

opinion for the Stony Creek siphon, and permit conditions are expected to be completed in fall of 2001. Programmatic consultation under Section 7 of ESA for remaining features of the West Sacramento Valley Study Area was completed in the summer of 1999. Steps toward the acquisition of a perpetual Wetland Habitat Easement were initiated, fulfilling mitigation requirement for Giant Garter Snake in accordance with ESA-related environmental commitments for West Sacramento Valley area refuges.

Construction Activities. The funding of the GCID Construction Agreement continued in FY 2000.

Long-term Conveyance Contracts. The funding of the Long-term Conveyance Agreement with GCID continued, providing water supplies to the three NWR's in the West Sacramento Valley in FY 2000.

Refuge Water Supply Contracts. Memoranda of Understanding were negotiated with the Service to provide firm water supplies to NWR areas in the Sacramento Valley. It is anticipated that these agreements will be released for a 60 day public review and comment period early in FY 2001, with execution of the agreements anticipated by January 19, 2001.

East Sacramento Valley Study Area

Planning. The Final EA/IS for Gray Lodge Wildlife Area (WA) and Sutter NWR was finalized in December 1997. The corresponding FONSI/Neg Dec was signed in August 1998. Consultation under Section 7 of ESA was completed in the summer of 1999.

Negotiations continued for implementing of the Sut-10 alternative for Sutter NWR and the Gray-9 alternative for Gray Lodge WA. Negotiations with respective water districts for the use of existing facilities was delayed this year. Outstanding issues are being reviewed and negotiations will resume with the intent of completing the conveyance planning.

Steps toward acquisition of a perpetual Wetland Habitat Easement were initiated, fulfilling mitigation requirement for the Giant Garter Snake in accordance with ESA-related environmental commitments for East Sacramento Valley area refuges.

Long-term Conveyance Contracts. During the implementation planning phase, Interior and DFG relied upon pre-CVPIA and interim conveyance agreements to "wheel" water to certain wildlife refuges until the long-term recommended alternatives can be implemented. These interim agreements are in place with Biggs-West Gridley Water District to serve Gray Lodge Wildlife Area.

Negotiations for long-term conveyance agreements, as part of implementation of the recommended alternative, were initiated in the summer of 1999 with Sutter Extension Water District for the conveyance of water to the Sutter NWR. Negotiations for long-term conveyance and facilities improvement agreements, as part of the implementation of the recommended alternative, were initiated in the summer of 1999 with Biggs-West Gridley Water District for conveyance of water to the Gray Lodge WA. Negotiations will continue through 2001.

Refuge Water Supply Contracts. A water supply contract was negotiated for the Gray Lodge Wildlife Management Area with the DFG. A Memorandum of Understanding was negotiated with the Service which includes the Sutter NWR area. It is anticipated that these agreements will be released for a 60 day public review and comment period early in FY 2001 with execution of the agreements anticipated by January 19, 2001.

San Joaquin Basin Action Plan (SJBAP) Lands/Grassland Study Area

Planning. The Final EA/IS for the San Joaquin Basin Action Plan was completed in 1997. An Implementation Plan was completed in April of 1998, and conveyance agreements were completed in the summer of 1998. Reclamation is currently administering the cooperative agreements entered into with the San Luis Canal Company (SLCC) , Grassland Water District (GWD), and Central California Irrigation District (CCID) for conveyance of refuge water supply, including construction and rehabilitation of necessary facilities to meet the needs of the refuges within the San Joaquin Basin Action Plan area. Reclamation is completing design and construction work for remaining facilities identified in the implementation plan. Construction of these facilities will continue for FYs 2001 and 2002.

Efforts to complete a report on water delivery options for the East Bear Creek Unit of the San Luis National Wildlife Refuge have been ongoing this FY. Reclamation contracted for preparation of this report which is about 90 percent complete. The conclusions in this report thus far indicate water supply for the East Bear Creek Unit will be supplied by the Merced Irrigation District from March through November, and through the SLCC utilizing CVP water, from October through February. The final report, along with the determination of the preferred alternative for delivery, will be completed in FY 2001.

Construction Activities. A contract for construction of the China Island's "J" Lateral Pumping Plant and Pipeline was awarded on January 12, 1998, and completed in 2000.

Both the SLCC and the GWD have completed the capacity and efficiency improvements to their facilities. The remaining work to be completed by the SLCC includes installing various pipe crossings or culverts. The remaining work for the GWD includes the filling of

low areas along canal embankments and final grading of excavated materials along Mosquito Ditch.

Progress is being made on the capacity and efficiency improvements to CCIC facilities. CCID completed Phase I of the district's portion of the reconstruction of the Newman Canal located east of State Highway 33.

Reclamation awarded a contract on August 14, 2000, to demolish and abandon the existing Newman Canal tie-in with CCID's crossing at Hwy 33, and to construct 2 miles of concrete lined canal, earth embankment, two turnouts, irrigation pipe crossing, two check drop structures, two road crossings, and a ramp flume. Completion of the contract is expected in FY 2001.

Reclamation awarded a contract on October 30, 1999, to line the "J" Lateral Reservoir on the China Island Unit. Work under this contract includes lining the five acre reservoir with a 30 mil PVC liner to eliminate water loss due to reservoir seepage. Work under this contract was completed in FY 2000.

The Grasslands Water District's San Luis Spillway Ditch was increased from its previous capacity of 300 cfs to 350 cfs in order to accommodate the delivery of water to wetland habitat in the Grasslands Resource Conservation District and portions of San Luis NWR. Specifications and drawings are estimated to be 90-percent complete by the end of FY 2000 and fully completed by early FY 2001.

Long-term Conveyance Contracts. Funding of the Long-term Conveyance Agreements with GWD, SLCC and CCID continued, providing water supplies to wetland habitat areas of the San Joaquin Valley.

Refuge Water Supply Contracts. Water Supply Contracts were negotiated with the GWD and the DFG. Memoranda of Understanding were negotiated with the Service for the San Joaquin Valley NWR's. It is anticipated that these agreements will be released for a 60 day public review and comment period early in FY 2001 with execution of the agreements anticipated by January 19, 2001.

State Cost-Share. Sections 3406(d)(3) and (5) of the CVPIA mandate a State cost-share of 25 percent on Level 4 incremental conveyance and water supply costs be recovered through "direct reimbursement or equivalent in-kind contributions." A task order for the China Island Unit of the SJBAP was completed in FY 2000.

Mendota Wildlife Area

Planning. The public review and comment period for the final EA/IS for Mendota WA is scheduled to occur in winter of 2000. It is anticipated that the corresponding FONSI/Neg Dec will be signed in late spring of 2001. Programmatic consultation under Section 7 of ESA was completed the summer of 1999. Implementation of the recommended long-term conveyance alternative is scheduled to begin in the Spring of 2001.

South San Joaquin Valley Study Area

Planning. The Draft NEPA/CEQA document for the South San Joaquin Valley Study Area was completed in April of 1997. The final NEPA/CEQA document is scheduled for

completion, pending signing of the CVPIA PEIS Record of Decision, in the winter of 2001. Consultation under Section 7 of ESA was completed in summer of 1999.

Long-term Conveyance Contracts. During the implementation planning phase, Interior and DFG have relied upon pre-CVPIA and interim conveyance agreements to "wheel" water to certain wildlife refuges until the long-term recommended alternatives can be implemented. These interim agreements are in place with Buena Vista Water District and DWR to serve the Kern NWR.

Refuge Water Supply Contracts. Memoranda of Understanding were negotiated with the Service for the San Joaquin NWR's which includes the Pixley and Kern NWR's. It is anticipated that these agreements will be released for a 60 day public review and comment period early in FY 2001 with execution of the agreements anticipated by January 19, 2001.

Project Title: Land Retirement Program
CVPIA Section 3408(h)
FY 2000 - $9,182,000

FY 2000 Accomplishments

An EA was completed for the 15,000 acre Land Retirement Program Demonstration Project in FY 2000 and a FONSI was signed by Reclamation, the Service, and Bureau of Land Management (BLM).

In January 2000, as part of the 15,000 acre Demonstration Project, 2,646 acres were acquired in the Alpaugh area. Of this total acreage, 1,068 acres were in Kings County (455 acres acquired by the CVP Conservation Program), and 1,578 acres were in Tulare County.

Research design was completed and implemented, by the Endangered Species Recovery Program (ESRP) Office (joint Reclamation and Service effort), on twenty 40-acre plots within boundaries of the Westlands Water District (WWD). ESRP began seed collection and plant propagation, established plots, planted sterile barley to control weeds, and surveyed biota to establish baseline conditions.

The Quality Assurance Plan for the monitoring of soils, groundwater and surface water at the WWD project area was completed. A monitor well network was installed to monitor groundwater levels and quality, and groundwater levels were monitored on a quarterly basis. A groundwater modeling study was completed, focusing on various land retirement scenarios within the WWD that will serve as a planning aid for future land retirement actions within that district. Soil samples were collected to establish baseline soil chemistry within Demonstration Project lands.

To assist program implementation, an Interagency Agreement was developed between Reclamation and BLM allowing BLM to directly acquire and manage approximately 8,000 acres in the Alpaugh study area. Additionally, Phase I Environmental Site Assessments for approximately 6,000 acres of agricultural properties were completed, and the first Annual Report on the Demonstration Project was published and distributed (May 2000).